

## TENT COOPERATION TRE I Y

PCT

## NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Assistant Commissioner for Patents  
 United States Patent and Trademark  
 Office  
 Box PCT  
 Washington, D.C.20231  
 ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

<b>Date of mailing (day/month/year)</b> 08 May 2000 (08.05.00)	
<b>International application No.</b> PCT/FI99/00666	<b>Applicant's or agent's file reference</b> 2980353PC/nu
<b>International filing date (day/month/year)</b> 11 August 1999 (11.08.99)	<b>Priority date (day/month/year)</b> 12 August 1998 (12.08.98)
<b>Applicant</b> TIIHONEN, Juha et al	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:

09 March 2000 (09.03.00)

☐ in a notice effecting later election filed with the International Bureau on:2. The election ☒ was☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b):

The International Bureau of WIPO  
 34, chemin des Colombettes  
 1211 Geneva 20, Switzerland

Authorized officer

R. E. Stoffel

## PCT REQUEST

2980353PC/nu

Original (for SUBMISSION) - printed on 11.08.1999 08:23:09 AM

0	For receiving Office use only	
0-1	International Application No.	PCT/FI 9 9 / 0 0 6 6 6
0-2	International Filing Date	1 1 AUG 1999 ( 1 1 . 08 . 99 )
0-3	Name of receiving Office and "PCT International Application"	The Finnish Patent Office PCT International Application
0-4	Form - PCT/RO/101 PCT Request	
0-4-1	Prepared using	PCT-EASY Version 2.84 (updated 01.07.1999)
0-5	Petition The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty	
0-6	Receiving Office (specified by the applicant)	National Board of Patents and Registration (Finland) (RO/FI)
0-7	Applicant's or agent's file reference	2980353PC/nu
I	Title of invention	CONSIDERING PROPAGATION DELAY ON DATA LINK
II	Applicant	
II-1	This person is:	applicant only
II-2	Applicant for	all designated States except US
II-4	Name	NOKIA TELECOMMUNICATIONS OY
II-5	Address:	Keilalahdentie 4 FIN-02150 Espoo Finland
II-6	State of nationality	FI
II-7	State of residence	FI
III-1	Applicant and/or inventor	
III-1-1	This person is:	applicant and inventor
III-1-2	Applicant for	US only
III-1-4	Name (LAST, First)	TIIHONEN, Juha
III-1-5	Address:	Komentajankatu 8 F 46 FIN-02600 Espoo Finland
III-1-6	State of nationality	FI
III-1-7	State of residence	FI

## PCT REQUEST

Original (for SUBMISSION) - printed on 11.08.1999 08:23:09 AM

III-2	Applicant and/or inventor	applicant and inventor
III-2-1	This person is:	US only
III-2-2	Applicant for	PARKKARI, Tommi
III-2-4	Name (LAST, First)	Käärtipolku 10 A 6
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III-2-6	State of nationality	FI
III-2-7	State of residence	FI
III-3	Applicant and/or inventor	applicant and inventor
III-3-1	This person is:	US only
III-3-2	Applicant for	TURUNEN, Jouni
III-3-4	Name (LAST, First)	Annantie 18
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III-3-6	State of nationality	FI
III-3-7	State of residence	FI
III-4	Applicant and/or inventor	applicant and inventor
III-4-1	This person is:	US only
III-4-2	Applicant for	PEISALO, Jorma
III-4-4	Name (LAST, First)	Laajaniitynkuja 3 I 71
III-4-5	Address:	FIN-01620 Vantaa Finland
III-4-6	State of nationality	FI
III-4-7	State of residence	FI
III-5	Applicant and/or inventor	applicant and inventor
III-5-1	This person is:	US only
III-5-2	Applicant for	OHVO, Mikko
III-5-4	Name (LAST, First)	Johanbergintie 102
III-5-5	Address:	FIN-04660 Numminen Finland
III-5-6	State of nationality	FI
III-5-7	State of residence	FI
IV-1	Agent or common representative; or address for correspondence The person identified below is hereby/has been appointed to act on behalf of the applicant(s) before the competent International Authorities as:	agent
IV-1-1	Name	KOLSTER OY AB
IV-1-2	Address:	Iso Roobertinkatu 23 P.O. Box 148 FIN-00121 Helsinki Finland
IV-1-3	Telephone No.	358 9 618 821
IV-1-4	Facsimile No.	358 9 602 244
IV-1-5	e-mail	kolster@kolster.fi

## PCT REQUEST

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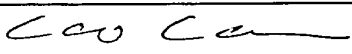
Original (for SUBMISSION) - printed on 11.08.1999 08:23:09 AM

V	Designation of States	
V-1	Regional Patent (other kinds of protection or treatment, if any, are specified between parentheses after the designation(s) concerned)	<p>AP: GH GM KE LS MW SD SL SZ UG ZW and any other State which is a Contracting State of the Harare Protocol and of the PCT</p> <p>EA: AM AZ BY KG KZ MD RU TJ TM and any other State which is a Contracting State of the Eurasian Patent Convention and of the PCT</p> <p>EP: AT BE CH&amp;LI CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE and any other State which is a Contracting State of the European Patent Convention and of the PCT</p> <p>OA: BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG and any other State which is a member State of OAPI and a Contracting State of the PCT</p>
V-2	National Patent (other kinds of protection or treatment, if any, are specified between parentheses after the designation(s) concerned)	<p>AE AL AM AT (patent and utility model)</p> <p>AU AZ BA BB BG BR BY CA CH&amp;LI CN CR CU CZ (patent and utility model) DE (patent and utility model) DK (patent and utility model) DM EE (patent and utility model) ES FI (patent and utility model) GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK (patent and utility model) SL TJ TM TR TT UA UG US UZ VN YU ZA ZW</p>
V-5	Precautionary Designation Statement In addition to the designations made under items V-1, V-2 and V-3, the applicant also makes under Rule 4.9(b) all designations which would be permitted under the PCT except any designation(s) of the State(s) indicated under item V-6 below. The applicant declares that those additional designations are subject to confirmation and that any designation which is not confirmed before the expiration of 15 months from the priority date is to be regarded as withdrawn by the applicant at the expiration of that time limit.	
V-6	Exclusion(s) from precautionary designations	NONE
VI-1	Priority claim of earlier national application	
VI-1-1	Filing date	12 August 1998 (12.08.1998)
VI-1-2	Number	981738
VI-1-3	Country	FI

## PCT REQUEST

2980353PC/nu

Original (for SUBMISSION) - printed on 11.08.1999 08:23:09 AM

VI-2	Priority document request The receiving Office is requested to prepare and transmit to the International Bureau a certified copy of the earlier application(s) identified above as item(s):	VI-1	
VII-1	International Searching Authority Chosen	Swedish Patent Office (ISA/SE)	
VIII	Check list	number of sheets	electronic file(s) attached
VIII-1	Request	4	-
VIII-2	Description	7	-
VIII-3	Claims	2	-
VIII-4	Abstract	1	2980353p.txt
VIII-5	Drawings	1	-
VIII-7	TOTAL	15	
	Accompanying items	paper document(s) attached	electronic file(s) attached
VIII-8	Fee calculation sheet	✓	-
VIII-10	Copy of general power of attorney	✓	-
VIII-16	PCT-EASY diskette	-	diskette
VIII-18	Figure of the drawings which should accompany the abstract	1	
VIII-19	Language of filing of the international application	English	
IX-1	Signature of applicant or agent		
IX-1-1	Name	KOLSTER OY AB	Leo Lehtonen

## FOR RECEIVING OFFICE USE ONLY

10-1	Date of actual receipt of the purported international application	11 AUG 1999	( 11 -08- 1999 )
10-2	Drawings:		
10-2-1	Received		
10-2-2	Not received		
10-3	Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application		
10-4	Date of timely receipt of the required corrections under PCT Article 11(2)		
10-5	International Searching Authority	ISA/SE	
10-6	Transmittal of search copy delayed until search fee is paid		

## FOR INTERNATIONAL BUREAU USE ONLY

11-1	Date of receipt of the record copy by the International Bureau	
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REC'D 05 DEC 2000

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## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

15

Applicant's or agent's file reference 2980353/PC/nu	<b>FOR FURTHER ACTION</b>	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/FI99/00666	International filing date (day/month/year) 11.08.1999	Priority date (day/month/year) 12.08.1998
International Patent Classification (IPC) or national classification and IPC <sub>7</sub> H 04 Q 7/38		
Applicant Nokia Networks OY et al		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 4 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of \_\_\_\_\_ sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand  09.03.2000	Date of completion of this report  28.11.2000
Name and mailing address of the IPEA/SE Patent- och registreringsverket Box 5055 S-102 42 STOCKHOLM Facsimile No. 08-667 72 88	Authorized officer  Agneta Änggård/Els Telephone No. 08-782 25 00

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/FI99/00666

## I. Basis of the report

### 1. With regard to the elements of the international application:\*

- ☒ the international application as originally filed
- ☐ the description:  
 pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the claims:  
 pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, as amended (together with any statement) under article 19  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the drawings:  
 pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the sequence listing part of the description:  
 pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

### 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language english which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☒ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

### 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

### 4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheet/fig \_\_\_\_\_

### 5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2 (c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item I and annexed to this report.

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/FI99/00666

## V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

### 1. Statement

Novelty (N)	Claims	<u>1-14</u>	YES
	Claims	_____	NO
Inventive step (IS)	Claims	<u>1-14</u>	YES
	Claims	_____	NO
Industrial applicability (IA)	Claims	<u>1-14</u>	YES
	Claims	_____	NO

### 2. Citations and explanations (Rule 70.7)

The claimed invention relates to a method and an equipment for adapting a timer setting to a propagation delay on a data link associated with a digital mobile communication system.

The object of the invention is to improve the connection quality due to propagation delay in a data call in a digital mobile communication system.

This is achieved by measuring the propagation delay associated with a connection section and setting the timer value of the timer associated with the GSM system RLP protocol to a proper value. The measurement procedure consists of measuring the time that has elapsed from the moment of transmission of a frame, until the arrival of an acknowledgement of the reception of the sent frame.

The following documents were referred to in the International Search Report:

US 5664 091  
 GSM Technical Specification GSM 04.22, v 5.0.0  
 WO 97 04611 A  
 WO 97 20407 A  
 US 4 642 806 A  
 WO 96 05709 A

.../...



**INTERNATIONAL PRELIMINARY EXAMINATION REPORT**

International application No.

PCT/FI99/00666

**Supplemental Box**

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: V

The cited documents disclose different solutions using a delay timer to compensate between different propagation delays, which relate to multipoint transmission instead of relating to point- to point transmission. The cited documents represent the general state of the art, but are not considered to be of particular relevance.

Thus, the claimed invention in claims 1-14 is novel and fulfils the requirements of inventive step and industrial applicability.

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/FI 99/00666

## A. CLASSIFICATION OF SUBJECT MATTER

IPC7: H04Q 7/38

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7: H04Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5664091 A (HENRY D. KEEN), 2 Sept 1997 (02.09.97), column 1, line 18 - line 31; column 3, line 26 - line 30; column 13, line 38 - line 57, abstract, column 14, line 18 - line 41.	1-14
A	GSM Technical Specification GSM 04.22, v 5.0.0, Dec. 1995 pp.9-18 Chapter 3; Table 1; section 5.4.3	7
A	WO 9704611 A1 (TELEFONAKTIEBOLAGET LM ERICSSON), 6 February 1997 (06.02.97), page 35, line 10 - line 30, claim 8	8,9

☒ Further documents are listed in the continuation of Box C.☒ See patent family annex.

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"I" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&amp;" document member of the same patent family

Date of the actual completion of the international search

24 January 2000

Date of mailing of the international search report

01-02-2000

Name and mailing address of the ISA/

Swedish Patent Office

Box 5055, S-102 42 STOCKHOLM

Facsimile No. +46 8 666 02 86

Authorized officer

Per Källquist/MN

Telephone No. +46 8 782 25 00

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/FI 99/00666

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 9720407 A1 (MOTOROLA LTD), 5 June 1997 (05.06.97), page 4, line 23 - line 32; page 27, line 6 - line 8; page 29, line 32 - line 35  --	1-14
A	US 4642806 A (M.T.H. HEWITT ET AL), 10 February 1987 (10.02.87), column 10, line 64 - line 67, claim 24  --	1-14
A	WO 9605709 A (PACIFIC COMMUNICATIONSCIENCES INC.), 22 February 1996 (22.02.96), page 23, line 6 - line 23  -- -----	1-14

INTERNATIONAL SEARCH REPORT  
Information on patent family members

International application No.  
PCT/FI 99/00666

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5664091 A	02/09/97	NONE	
WO 9704611 A1	06/02/97	AU 707478 B AU 6839896 A CA 2227556 A CN 1196153 A EP 0840986 A US 5825759 A	08/07/99 18/02/97 06/02/97 14/10/98 13/05/98 20/10/98
WO 9720407 A1	05/06/97	AU 5313696 A BR 9606806 A DE 19681171 T GB 2312813 A GB 9715934 D IL 117449 D US 5818825 A	19/06/97 30/12/97 05/02/98 05/11/97 00/00/00 00/00/00 06/10/98
US 4642806 A	10/02/87	AT 34892 T CA 1227844 A DE 3471856 A EP 0138365 A,B SE 0138365 T3 JP 1943968 C JP 2048890 C JP 6066740 B JP 6125321 A JP 7054924 B JP 60150345 A	15/06/88 06/10/87 07/07/88 24/04/85  23/06/95 25/04/96 24/08/94 06/05/94 07/06/95 08/08/85
WO 9605709 A	22/02/96	AU 3216095 A CA 2196903 A US 5594943 A	07/03/96 22/02/96 14/01/97